## **ATTORNEY DOCKET NO. 04150.0025U1 APPLICATION NO. 10/561,481**

## **LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application. In the amended claims, additions are shown as <u>underlined</u> and deletions are shown as <u>struckthrough</u>.

- 1. (Currently Amended) An extrusion coated substrate <u>selected from paper</u>, <u>cardboard</u>, <u>or aluminum foil</u>, having a coating comprising a <u>multimodal</u> polyethylene produced by polymerization catalysed by a single site catalyst <u>having an MFR<sub>2</sub> of 5 to 25 g/10min</u> and comprising as comonomers to ethylene at least two <u>different</u> C<sub>4-12</sub> alpha olefins <u>and an LDPE</u> wherein LDPE forms 15 to 35 wt.% of the coating.
- 2. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises as comonomers to ethylene at least two alpha olefins selected from but-1-ene, hex-1-ene, 4-methyl-pent-1-ene, hept-1-ene, oct-1-ene, and dec-1-ene.
- 3. (Previously Presented) An extrusion coated substrate as claimed in claim 2 wherein said polyethylene comprises an ethylene butene copolymer and an ethylene hexene copolymer.
- 4. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal terpolymer comprising
  - a) a lower molecular weight copolymer of ethylene and but-1-ene
  - b) a higher molecular weight copolymer of ethylene and a  $C_5$  to  $C_{12}$  alpha-olefin.
- 5. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene comprises a bimodal polymer comprising
  - a) a lower molecular weight polymer which is a binary copolymer of ethylene and a  $C_4$  to  $C_{12}$  alpha-olefin and
  - b) a higher molecular weight polymer which is either a binary copolymer of ethylene and but-1-ene, if the lower molecular weight polymer of a) is a binary copolymer

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of ethylene and a  $C_5$  to  $C_{12}$  alpha-olefin, or a terpolymer of ethylene, but- 1-ene and a  $C_5$  to  $C_{12}$  alpha-olefin.

- 6. (Previously Presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene has an MWD 3 to 6, an MFR<sub>2</sub> of 5 to 20 g/l0min and a density of 905 to 930 kg/m3.
- 7. (Previously presented) An extrusion coated substrate as claimed in claim 1 wherein said polyethylene has a heat sealing force which varies by less than 2N/25.4 mm over a temperature range of at least 30 °C.
- 8. (Canceled)
- 9. (Canceled)
- 10. (Previously Presented) An extrusion coated substrate as claimed in claim 1 comprising multiple coating layers.
- 11. (Canceled)
- 12. (Canceled)
- 13. (Currently Amended) A process for extrusion coating a substrate comprising extruding a multimodal polyethylene produced by polymerization catalysed by a single site catalyst having an MFR<sub>2</sub> of 5 to 25 g/10 min and which comprises as comonomers to ethylene at least two different C<sub>4-12</sub> alpha olefins and an LDPE wherein LDPE forms 15 to 35 wt.% to form a polymer melt and coating a substrate selected from paper, cardboard, or aluminum foil having a coating with said melt.
- 14. (Previously Presented) A process as claimed in claim 13 wherein said polyethylene is produced in a two-stage process comprising a loop reactor followed by a gas phase reactor.
- 15. (Canceled)

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